

Application No.: 09/667,666
Amendment Dated: May 21, 2004
Reply to Office Action of: February 25, 2004

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An audio transmitting apparatus comprising ~~at least:~~

data transmitting means for sending out digital audio data and identification information showing a coding type of the digital audio data, the identification information added on the digital audio data.

wherein said data transmitting means ~~issues~~ makes the digital audio data be substantially zero data and adds a silent identification information C on showing the substantially zero data, and issues the substantially zero data for a specified time, when the identification information changes from an identification information A showing a first coding type to a second identification information B showing a second coding type.

2. (Original) The audio transmitting apparatus of claim 1, wherein said identification information A shows linear PCM mode, and said identification information B shows nonlinear PCM mode.

3. (Original) The audio transmitting apparatus of claim 1, wherein the specified time of transition of said identification information from said identification information A to said identification information B ranges from 3 msec to hundreds of msec.

4. (Original) The audio transmitting apparatus of claim 1, wherein the data of said identification information A fades out immediately before transition.

5. (Original) The audio transmitting apparatus of claim 1, wherein the data of said identification information B fades in for a specified time after transition.

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6. (Original) The audio transmitting apparatus of any one of claims 1 to 5, wherein the transmission route for sending out data is IEEE1394.

7. (Original) The audio transmitting apparatus of any one of claims 1 to 5, wherein the transmission route for sending out data is IEEE1394, and said silent identification information C is ancillary data specified in Audio and Music Data Transmission Protocol of the IEEE1394.

8. (Original) The audio transmitting apparatus of any one of claims 1 to 5, wherein the transmission route for sending out data is IEEE1394, and said silent identification information C has a specified data region, and said data region is "0" in a specified bit row at the MSB side.

9. (Currently Amended) An audio receiving apparatus comprising:

a data separator for separating received data into audio data and identification information showing a coding type of the received audio data;

identification information distinguishing means for distinguishing ~~an a content~~ of the identification information showing ~~a coding type of received audio data~~ separated by said data separator; and

means for selecting data processing depending on the output of said identification information distinguishing means,

wherein said selecting means issues the digital audio data directly in the case of identification information A showing linear PCM mode, an output of data decoding means in the case of identification information B showing nonlinear PCM mode, and selects the output different from the case of the identification information before transition in the case of identification information C showing the transition period of transition from identification information A or identification information B to other identification information.

10. (Original) The audio receiving apparatus of claim 9, wherein the output is muted nearly to zero when said identification information C is detected depending on the output of said identification information distinguishing means.

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11. (Original) The audio receiving apparatus of claim 9 or 10, wherein the transmission route for receiving data is IEEE1394.

12. (Original) The audio receiving apparatus of claim 9 or 10, wherein the transmission route for receiving data is IEEE1394, and said silent identification information C is ancillary data specified in Audio and Music Data Transmission Protocol of the IEEE1394.

13. (Original) The audio receiving apparatus of claim 9 or 10, wherein the transmission route for receiving data is IEEE1394, and said silent identification information C has a specified data region, and said data region is "0" in a specified bit row at the MSB side.

14. (Currently Amended) An audio transmitting apparatus comprising:

~~at least~~ data transmitting means for sending out ~~a~~ digital audio data and an identification information showing a coding type of the digital audio data in a transmission route, the identification information added on the digital audio data,

wherein said data transmitting means ~~issues~~ adds a silent identification information C and an identification information A showing a first coding type on the digital audio data and issues the silent identification information C and the identification information A added on the digital audio data for a specified time T1, when the identification information changes from the identification information A to a identification information B showing a second coding type.

15. (Currently Amended) An audio transmitting apparatus comprising:

~~at least~~ data transmitting means for sending out digital audio data and identification information showing a coding type of the digital audio data in a transmission route, the identification information added on the digital audio data,

wherein said data transmitting means ~~issues~~ adds a silent identification information C and an identification information B showing a second coding type on the digital audio data and issues the silent identification information C and the identification information B added on the digital audio data for a specified time T2

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when the identification information changes from an identification information A showing a first coding type to the identification information B.

16. (Currently Amended) An audio transmitting apparatus comprising:

~~at least data transmitting means for sending out a digital audio data and an identification information showing an coding type of the digital audio data in a transmission route, the identification information added on the digital audio data,~~

wherein said data transmitting means ~~issues~~ adds a silent identification information C and an identification information A showing a first coding type on the digital audio data and issues the silent identification information C and the identification information A added on the digital audio data for a specified time T1 when ~~data of the~~ identification information A changes to information B showing a second coding type, and further ~~issues~~ adds the silent identification information C and the identification information B on the digital data and issues the silent identification information C and the identification information added on the digital audio data for a specified time T2.

17. (Original) The audio transmitting apparatus of any one of claims 14 to 16, wherein one of said identification information A or identification information B shows non-encode mode, and others show encode mode.

18. (Original) The audio transmitting apparatus of claim 14 or 16, wherein said T1 is 3 msec or more.

19. (Original) The audio transmitting apparatus of claim 15 or 16, wherein said T2 is 3 msec or more.

20. (Original) The audio transmitting apparatus of any one of claims 14 to 16, wherein the transmission route for sending out data is IEEE1394.

21. (Original) The audio transmitting apparatus of any one of claims 14 to 16, wherein the transmission route for sending out data is IEEE1394, and said silent identification information C is ancillary data specified in Audio and Music Data Transmission Protocol of the IEEE1394.

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22. (Original) The audio transmitting apparatus of any one of claims 14 to 16, wherein when said identification information is said silent identification information C, sequentially different data are stored in a specified data region following said silent identification information C.

23. (Original) The audio transmitting apparatus of any one of claims 14 to 16, wherein when said identification information is said silent identification information C, sequentially different data are stored in a specified bit row at the LSB side in a specified data region following said silent identification information C.

24. (Original) The audio transmitting apparatus of any one of claims 14 to 16, wherein when said identification information is said silent identification information C, pseudo-random number data are stored in a specified data region following said silent identification information C.

25. (Original) The audio transmitting apparatus of any one of claims 14 to 16, wherein when said identification information is said silent identification information C, pseudo-random number data are stored in a specified bit row at the LSB side in a specified data region following said silent identification information C.

26. (Original) An audio receiving apparatus comprising identification information distinguishing means for distinguishing the identification information showing the type of the data received through a transmission route,

wherein digital audio data is issued directly in the case of identification information showing non-encode mode, depending on the output of said identification information distinguishing means, or issued by way of data decoding means in the case of identification information showing encode mode, and

when said identification information distinguishing means distinguishes silent identification information C,

the output is immediately muted nearly to zero in the case of identification information showing the identification information before the silent identification information C is non-encode mode, or

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the output is muted nearly to zero after termination of processing of the data in process by said data decoding means in the case of identification information showing the identification information before the silent identification information C is encode mode.

27. (Original) An audio receiving apparatus comprising identification information distinguishing means for distinguishing the identification information showing the type of the data received through a transmission route,

wherein digital audio data is issued directly in the case of identification information showing non-encode mode, depending on the output of said identification information distinguishing means, or issued by way of data decoding means in the case of identification information showing encode mode, and

when said identifier distinguishing means distinguishes silent identification information C,

the output is immediately muted nearly to zero in the case of identification information showing the identification information before the silent identification information C is non-encode mode, or

the output is muted nearly to zero after termination of processing of the data in process by said data decoding means in the case of identification information showing the identification information before the silent identification information C is encode mode,

thereby changing to the setting for data output depending on the identification information accompanying said silent identification information C in the midst of muting by said silent identification information C.

28. (Original) The audio receiving apparatus of claim 26 or 27, wherein the transmission route for receiving data is IEEE1394.

29. (Original) The audio receiving apparatus of claim 26 or 27, wherein the transmission route for receiving data is IEEE1394, and said silent identification information C is ancillary data specified in Audio and Music Data Transmission Protocol of the IEEE1394.

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30. (New) The audio receiving apparatus according to any one of claims 1, 9, 14, 15 and 16,

wherein the identification information further including information showing at least one of a number of channels a data length, a sampling frequency channel allocation information, dynamic range control information, a down-mix coefficient, an emphasis flag, copy control information and an internal standard recording code (ISRC) of the digital audio data.

31. (New) An audio transmitting apparatus comprising:

data transmitting means for sending out digital audio data and identification information showing at least one of a coding type, a number of channels, and a sampling frequency of the digital audio data in a transmission route, the identification information added on the digital audio data in a transmission route, the identification information added on the digital audio data,

wherein when said at least one of the coding type, the number of channels, and the sampling frequency shown by identification information A changes to said at least one of the coding type, the number of channels shown by identification information B which is different information than the identification information A, said data transmitting means adds a silent identification information C and the identification information A and issues the silent identification information C and the identification information A added on the digital audio data for a specified time T1.

32. (New) An audio transmitting apparatus comprising:

data transmitting means for sending out digital audio data and identification information showing at least one of a coding type, a number of channels, and a sampling frequency of the digital audio data in a transmission route, the identification information added on the digital audio data in a transmission route, the identification information added on the digital audio data,

wherein when said at least one of the coding type, the number of channels, and the sampling frequency shown by identification information A changes to said at least one of the coding type, the number of channels shown by identification information B

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which is different information than the identification information A, said data transmitting means adds a silent identification information C and the identification information B and issues the silent identification information C and the identification information B added on the digital audio data for a specified time T2.

33. (New) An audio transmitting apparatus comprising:

data transmitting means for sending out digital audio data and identification information showing at least one of a coding type, a number of channels, and a sampling frequency of the digital audio data in a transmission route, the identification information added on the digital audio data in a transmission route, the identification information added on the digital audio data,

wherein when said at least one of the coding type, the number of channels, and the sampling frequency shown by identification information A changes to said at least one of the coding type, the number of channels shown by identification information B which is different information than the identification information A, said data transmitting means adds a silent identification information C and the identification information A and issues the silent identification information C and the identification information A added on the digital audio data for a specified time T1, and further adds the silent identification information C and the identification information B on the digital data and issues the silent identification information C and the identification information B added on the digital audio data for a specified time T2.